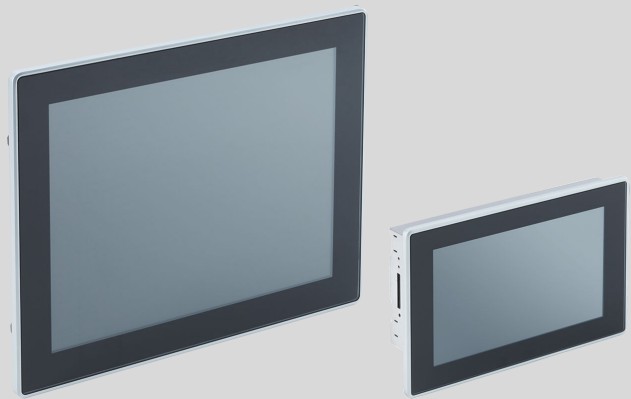


SID

Sensor Integration Display



Described product

SID

Manufacturer

SICK AG
Erwin-Sick-Str. 1
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Germany

Legal information

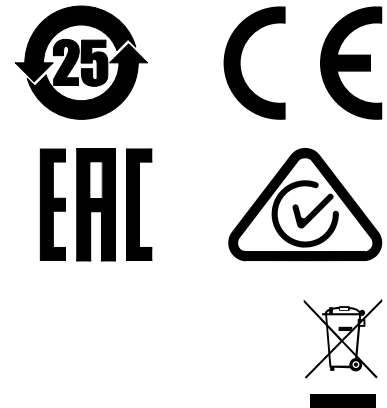
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Original document

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1 About this document

1.1 Information on the operating instructions

These operating instructions provide important information on how to use devices from SICK AG.

Prerequisites for safe work are:

- Compliance with all safety notes and handling instructions supplied.
- Compliance with local work safety regulations and general safety regulations for device applications

The operating instructions are intended to be used by qualified personnel and electrical specialists.



NOTE

Read these operating instructions carefully to familiarize yourself with the device and its functions before commencing any work.

The operating instructions are an integral part of the product. Store the instructions in the immediate vicinity of the device so they remain accessible to staff at all times. Should the device be passed on to a third party, these operating instructions should be handed over with it.

These operating instructions do not provide information on operating the machine or system in which the device is integrated. For information about this, refer to the operating instructions of the specific machine.

Handling of the AppSpace software development environment and AppEngine software platform pre-installed on the Sensor Integration Display as well as of the SOPAS ET configuration tool is not covered in these operating instructions.

1.2 Explanation of symbols

Warnings and important information in this document are labeled with symbols. Signal words introduce the instructions and indicate the extent of the hazard. To avoid accidents, damage, and personal injury, always comply with the instructions and act carefully.



DANGER

... indicates a situation of imminent danger, which will lead to a fatality or serious injuries if not prevented.



WARNING

... indicates a potentially dangerous situation, which may lead to a fatality or serious injuries if not prevented.



CAUTION

... indicates a potentially dangerous situation, which may lead to minor/slight injuries if not prevented.



NOTICE

... indicates a potentially harmful situation, which may lead to material damage if not prevented.

**NOTE**

... highlights useful tips and recommendations as well as information for efficient and trouble-free operation.

1.3 Further information

**NOTE**

Further documentation for the device can be found on the online product page at:

- www.sick.com/SID

There, additional information has been provided depending on the product, such as:

- Model-specific online data sheets for device variants, containing technical data, dimensional drawing, and specification diagrams
 - EU declarations of conformity for the product family
 - Dimensional drawings and 3D CAD dimension models of the device variants in various electronic formats
 - This documentation, available in English and German, and in other languages if necessary
 - Other publications related to the devices described here
 - Publications dealing with accessories
-

2 Safety information

Embedded systems are complex and sensitive electronic products. They are only allowed to be operated by qualified and trained personnel.

Any damage to the device or the machine caused by failure to observe the instructions in these operating instructions will void the warranty.

The device is only allowed to be repaired by SICK and by personnel authorized by SICK, otherwise the warranty will be invalidated.

2.1 General safety notes

The following safety notes must always be observed regardless of specific application conditions:

- Do not drop or throw the device.
- Keep the device away from water and other liquids.
- Only install the device in accordance with the country-specific specifications.
- Only operate the device in accordance with the specifications, see "[Technical data](#)", page 27.
- Do not lay cables in any way which represents a risk of tripping.
- Do not install the device in direct sunlight.
- Do not install the device near heat sources.
- Only install the device in a dry environment.
- Screw on all male connectors of the connecting cables or fix them against the housing.
- Only install the device in a fixed position.
- Do not cover the cooling fins or restrict them in their functionality.
- Keep these operating instructions handy and make them available to the operating personnel.

2.2 Intended use

The device is a programmable, graphical user interface (HMI) and control unit for sensors and sensor integration devices. The device is exclusively used in an industrial environment in production, logistics, testing, and control. Other applications are possible depending on the device-specific properties.

The device is programmed on a PC by using the development environment software SICK AppSpace. Depending on the application, a browser-based, graphical user interface (HMI) can be created, which provides opportunities defined by the application developer to influence an application at operator level.

The device is connected to the peripherals via the built-in interfaces. However, configuration, programming, and control requires various technical skills, depending on how the device is connected and used.

2.3 Improper use

Any use outside of the stated areas, in particular use outside of the technical specifications and the requirements for intended use, will be deemed to be incorrect use.

- The device does not constitute a safety component in accordance with the respective applicable safety standards for machines.
- The device must not be used in explosion-hazardous areas, in corrosive environments or under extreme environmental conditions.
- Any use of accessories not specifically approved by SICK AG is at your own risk.



WARNING

Danger due to improper use!

Any improper use can result in dangerous situations.

Therefore, observe the following information:

- Product should be used only in accordance with its intended use.
 - All information in these operating instructions must be strictly observed.
 - Shut down the product immediately in case of damage.
-

2.4 Internet protocol (IP) technology



NOTE

SICK uses standard IP technology in its products. The emphasis is placed on availability of products and services.

SICK always assumes the following prerequisites:

- The customer ensures the integrity and confidentiality of the data and rights affected by its own use of the aforementioned products.
 - In all cases, the customer implements the appropriate security measures, such as network separation, firewalls, virus protection, and patch management.
-

2.5 Limitation of liability

Relevant standards and regulations, the latest technological developments, and our many years of knowledge and experience have all been taken into account when compiling the data and information contained in these operating instructions. The manufacturer accepts no liability for damage caused by:

- Non-adherence to the product documentation (e.g., operating instructions)
- Incorrect use
- Use of untrained staff
- Unauthorized conversions or repair
- Technical modifications
- Use of unauthorized spare parts, consumables, and accessories

With special variants, where optional extras have been ordered, or owing to the latest technical changes, the actual scope of delivery may vary from the features and illustrations shown here.



NOTE

Programmable device

The Sensor Integration Display (SID) is a programmable device.

Therefore, the respective programmer is responsible for his/her programming performance and the resulting operating principle of the device.

The liability and warranty of SICK AG is limited to the device specification (hardware functionality and any programming interfaces) according to the agreed conditions.

Therefore, SICK AG is not liable, among other things, for damage that is caused by programming undertaken by the customer or third parties.

2.6 Modifications and conversions



NOTICE

Modifications and conversions to the device may result in unforeseeable dangers.

Interrupting or modifying the device or SICK software will invalidate any warranty claims against SICK AG. This applies in particular to opening the housing, even as part of mounting and electrical installation.

2.7 Requirements for skilled persons and operating personnel



WARNING

Risk of injury due to insufficient training.

Improper handling of the device may result in considerable personal injury and material damage.

- All work must only ever be carried out by the stipulated persons.

This product documentation refers to the following qualification requirements for the various activities associated with the device:

- **Instructed personnel** have been briefed by the operator about the tasks assigned to them and about potential dangers arising from improper action.
- **Skilled personnel** have the specialist training, skills, and experience, as well as knowledge of the relevant regulations, to be able to perform tasks delegated to them and to detect and avoid any potential dangers independently.
- **Electricians** have the specialist training, skills, and experience, as well as knowledge of the relevant standards and provisions, to be able to carry out work on electrical systems and to detect and avoid any potential dangers independently. The electrician must comply with the provisions of the locally applicable work safety regulation.

The following qualifications are required for various activities:

Table 1: Activities and technical requirements

Activities	Qualification
Mounting, maintenance	<ul style="list-style-type: none"> ■ Basic practical technical training ■ Knowledge of the current safety regulations in the workplace
Electrical installation, device replacement	<ul style="list-style-type: none"> ■ Practical electrical training ■ Knowledge of current electrical safety regulations ■ Knowledge of the operation and control of the devices in their particular application
Commissioning, configuration	<ul style="list-style-type: none"> ■ Basic knowledge of the Windows™ operating system in use ■ Basic knowledge of the design and setup of the described connections and interfaces ■ Basic knowledge of data transmission
Operation of the device for the particular application	<ul style="list-style-type: none"> ■ Knowledge of the operation and control of the devices in their particular application ■ Knowledge of the software and hardware environment for the particular application

2.8 Operational safety and specific hazards

Please observe the safety notes and the warnings listed here and in other chapters of these operating instructions to reduce the possibility of risks to health and avoid dangerous situations.



WARNING

Electrical voltage!

Electrical voltage can cause severe injury or death.

- Work on electrical systems must only be performed by qualified electricians.
 - The power supply must be disconnected when attaching and detaching electrical connections.
 - The product must only be connected to a voltage supply as set out in the requirements in the operating instructions.
 - Only open the device for the following activities: battery change
 - Disconnect the device from the power supply before accessing internal components.
 - Do not operate the device without adequate protective measures.
 - Only operate the device in accordance with the technical specifications.
 - National and regional regulations must be complied with.
 - Safety requirements relating to work on electrical systems must be complied with.
-



WARNING

Dangerous equipotential bonding currents!

Improper grounding can lead to dangerous equipotential bonding currents, which may in turn lead to dangerous voltages on metallic surfaces, such as the housing. Electrical voltage can cause severe injury or death.

- Work on electrical systems must only be performed by qualified electricians.
 - Follow the notes in the operating instructions.
 - Install the grounding for the product and the system in accordance with national and regional regulations.
-

2.9 Damage or permanent malfunction



NOTICE

Safe operation is no longer guaranteed in the following cases:

- The device is visibly damaged.
- The display remains dark or shows conspicuous patterns over a long period of time.
- The device does not react after a restart or reset.

In these cases, the device must be switched off and secured to prevent further use.

3 Product description

3.1 Device view

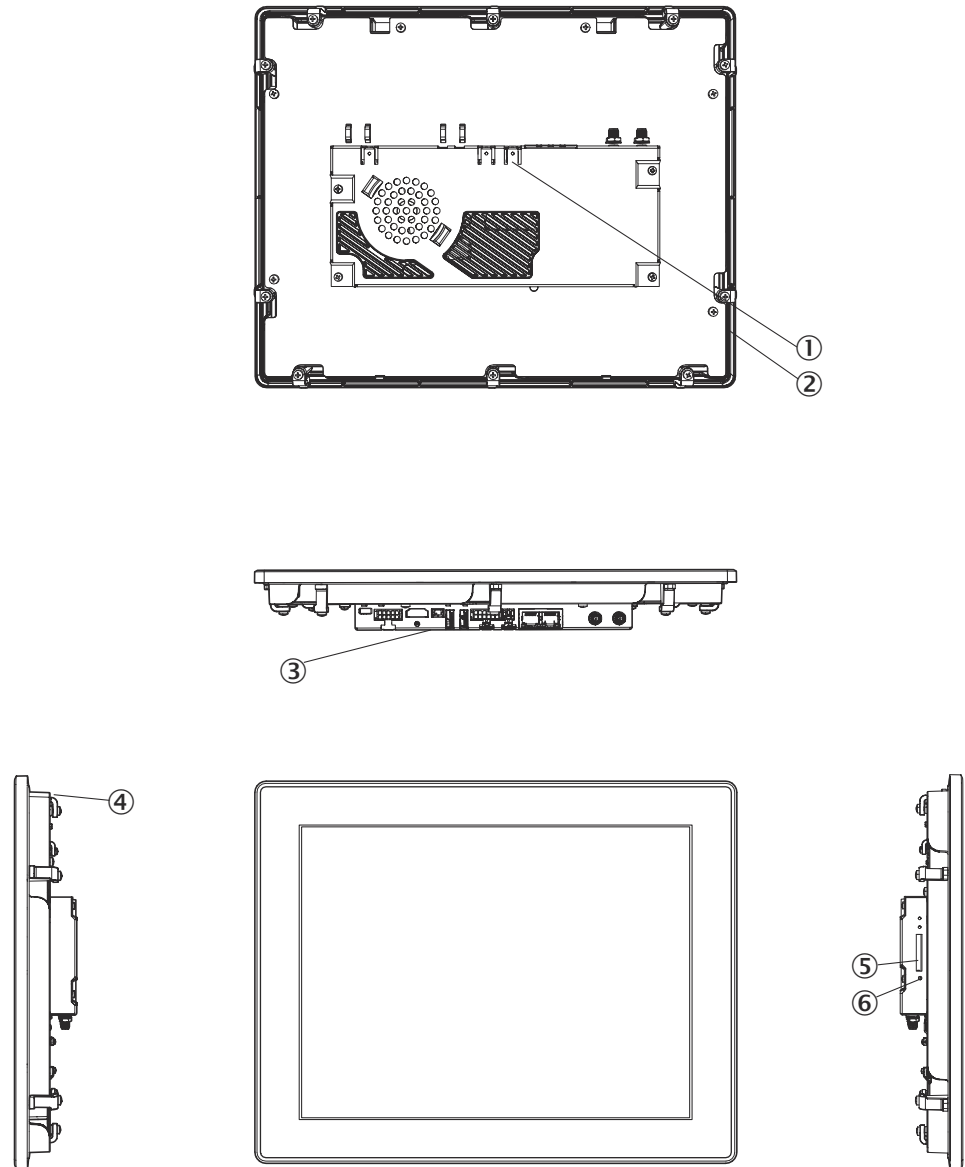


Figure 1: SID120 device view

- ① Functional ground (FG)
- ② Round cord seal
- ③ Connections
- ④ Retaining element
- ⑤ SD card reader
- ⑥ Status LED

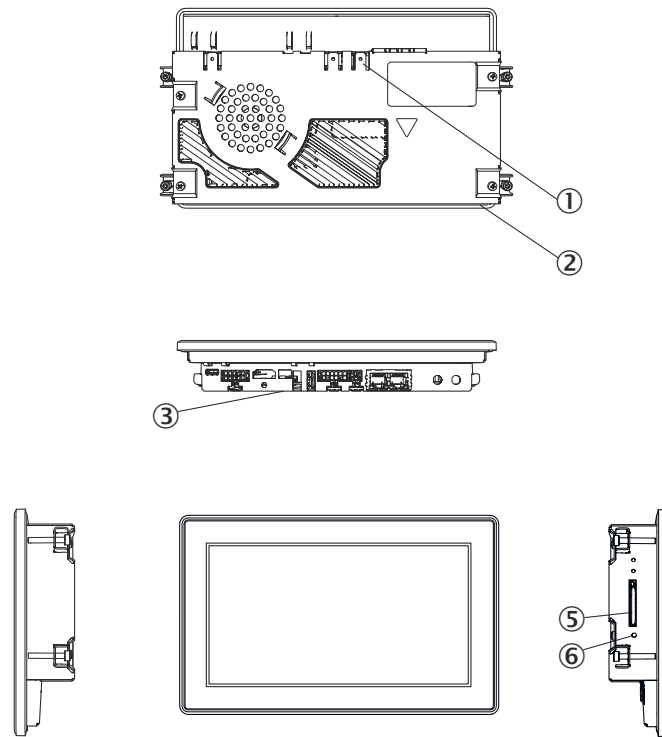


Figure 2: Device view SID 70

- ① Functional ground (FG)
- ② Round cord seal
- ③ Connections
- ⑤ SD card reader
- ⑥ Status LED

3.2 Functionality

The Sensor Integration Device – part of the SICK AppSpace eco-system – is opening up new possibilities for application solutions.

The SID is a browser-capable display for visualizing user interfaces of application programs.

With the SID, sensors can be configured and monitored, pre-processed data from connected peripheral devices can be displayed and processed (edge computing) or made available for Cloud applications.

The SICK AppSpace open software platform enables tailor-made application programs to be developed for demanding applications. The app is developed in the SICK AppStudio SDKs.

3.3 SICK AppSpace



Detailed instructions on the SICK AppStudio as well as programming the device can be found at supportportal.sick.com.

3.4 Preset Ethernet interfaces



NOTE

Preset IP addresses of the ETHERNET interfaces:

- ETHERNET 1: 192.168.0.1
 - ETHERNET 2: 192.168.1.1
-

Changing the IP addresses

The individual IP addresses can be changed using the SICK SOPAS ET PC tool. A description can be found in the SOPAS ET manual, which can be accessed via the help function in the SOPAS ET software.

4 Transport and storage

4.1 Transport

For your own safety, please read and observe the following notes:



NOTICE

Damage to the product due to improper transport.

- The device must be packaged for transport with protection against shock and damp.
- Recommendation: Use the original packaging as it provides the best protection.
- Transport should be performed by trained specialist staff only.
- The utmost care and attention is required at all times during unloading and transportation on company premises.
- Note the symbols on the packaging.
- Do not remove packaging until immediately before you start mounting.

4.2 Transport inspection

Immediately upon receipt in Goods-in, check the delivery for completeness and for any damage that may have occurred in transit. In the case of transit damage that is visible externally, proceed as follows:

- Do not accept the delivery or only do so conditionally.
- Note the scope of damage on the transport documents or on the transport company's delivery note.
- File a complaint.



NOTE

Complaints regarding defects should be filed as soon as these are detected. Damage claims are only valid before the applicable complaint deadlines.

4.3 Storage

Store the device under the following conditions:

- Recommendation: Use the original packaging.
- Do not store outdoors.
- Store in a dry area that is protected from dust.
- So that any residual damp can evaporate, do not package in airtight containers.
- Do not expose to any aggressive substances.
- Protect from sunlight.
- Avoid mechanical shocks.
- Storage temperature: see "Technical data", page 27.
- For storage periods of longer than 3 months, check the general condition of all components and packaging on a regular basis.

5 Mounting

5.1 Overview of mounting procedure



NOTICE

Damage to device through improper mounting.

Mount the device in an environment corresponding to enclosure rating IP54 (EN 60529), e.g., inside a control cabinet with enclosure rating IP54.



NOTE

The mounting procedure described here for the device meets the requirements for use in the target system.

Additional or different requirements may become necessary in the laboratory and during preparation, and should be taken into account as necessary, see "[Commissioning](#)", [page 22](#). If you have any questions or anything remains unclear in this regard, please contact our service team.

- Mounting the device.
- Connect the cables.
- Connecting peripheral devices.
- Connecting the voltage supply.

5.2 Scope of delivery

- SID
- SD card min. 4 GB
- Brackets
- Safety notes

5.3 Preparing for mounting

- Select the mounting site: Plan space requirements and sufficient distance from other devices. Pay attention to the possibility of heat dissipation on the back of the display.
- Unpack the device and allow to acclimatize to avoid formation of condensation.

5.4 Mounting the device

The Sensor Integration Display with single-board computer, touch display and housing is designed for front panel mounting into your device.

It is suitable for mounting in housings with a wall thickness of:

- **SID120:** 1.10 mm ... 4.15 mm
- **SID70:** 0.80 mm ... 12.0 mm

The following tightening torques are recommended for the fixing screws:

- **SID120:** 0.3 Nm
- **SID70:** 0.2 Nm

Mounting is from the front into a cut-out in a housing front.

The Sensor Integration Display is screwed on from the inside or fixed against the housing front with clamping screws.



NOTICE

- Implement suitable measures to prevent any foreign bodies from entering the connector openings or ventilation slots.
 - When selecting the installation location, make sure that heat dissipation is ensured on the rear of the device.
 - Install the device so that vertical air circulation is possible and the ventilation slots are free.
 - Install the device in such a way that there is sufficient distance to other devices or modules on the rear of the device.
 - Secure the connected cables with an additional strain relief.
-

6 Electrical installation

6.1 Important notes



NOTICE

Device damage due to improper supply voltage!

- Only operate the device with the specified supply voltage.
- The voltage supply and all connected signals must meet the requirements for extra-low voltages with safe separation (SELV) as specified in EN 61010.
- Only operate the device with a dedicated power supply unit. Please note that if additional loads are connected to the same power supply unit, its insulation between PE and GND will be removed.
- Applies to potential-bound system design: Connect the connection for GND from the 24 V output of the voltage supply to the potential equalization for a uniform reference potential. A central connection point is to be selected as far as possible.
- Connect the housing of the device to FG with low impedance. The integrated flat plugs on the rear of the housing are provided for this purpose (see "Device view", page 11).
- The external voltage supply of the device must bridge a short-term power interruption of 20 ms in order to meet the requirements of EN 60204-1.
- The device is designed for overvoltage category I. If the device is to be used in an overvoltage category II environment, suitable protective measures must be taken to meet the requirements of the EN 61010 standard.



NOTE

Layout of data cables

- Use screened data cables with twisted-pair wires.
- Implement the screening design correctly and completely.
- To avoid interference, e.g. from switching power supplies, motors, clocked drives, and contactors, always use cables and layouts that are suitable for EMC.
- Do not lay cables over long distances in parallel with power supply cables and motor cables in cable channels.



NOTE

Safe electrical insulation

Use a power supply unit with sufficient power, see "Mechanics and electronics", page 27.

Only operate the device with power supply units that are designed with safe electrical isolation according to IEC 60364-4-41 or HD 384.04.41 (VDE 0100, Part 410), e.g. according to the SELV standard.



NOTE

Recommended cables

It is recommended that cables with the following specifications should be used:

Function	Specification
Voltage supply	Cable cross-section min. 0.34 mm ²
Ethernet	Shielded, type CAT5e SFTP
USB	Shielded USB cable marked "Hi-Speed USB 2.0 certified", length < 3 m

6.2 Preparing the electrical installation

To carry out the electrical installation, you will need:

- Connection cables for the peripheral devices, including the corresponding data sheets
- Voltage supply cable
- If customers assemble the cables: crimping tool, ferrules, soldering iron, and other installation material

6.3 Assembling the cables (optional)



NOTE

Customer assembly of the cables is only necessary in special cases. SICK offers a large range of pre-assembled cables at: www.sick.com/SID.

Depending on the peripheral devices to be connected and the connecting interface used, various connection cables must be assembled before installing the device.

Ensure that you plan a sufficient length of cable for strain-relief clamps, for example.



NOTICE

Risk of damage/malfunction due to incorrect PIN assignment

Incorrect wiring of the male connectors/female connectors can lead to damage to or malfunctions in the system.

- Observe data sheets provided by the cable manufacturer.
- Observe the pin assignment.

6.4 Overview of connections

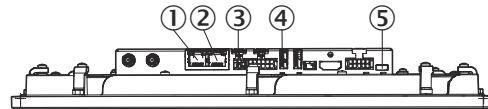


Figure 3: SID120 connection overview

- ① Ethernet 1
- ② Ethernet 2
- ③ Power
- ④ USB host
- ⑤ USB OTG

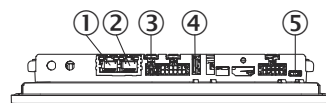


Figure 4: SID70 connection overview

- ① Ethernet 1
- ② Ethernet 2
- ③ Power
- ④ USB host
- ⑤ USB OTG

6.5 Pin allocation of the connections

6.5.1 ETHERNET

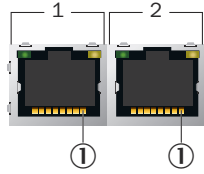


Table 2: Pin assignment for Ethernet 1+2

Pin	Signal	Function	Information
1	Tx+		Rx and Tx can be swapped over (Auto-MDIX). Polarity can be swapped over (automatic polarity correction).
2	Tx-		
3	Rx+		
4	SPARE 1		
5			
6	Rx-		
7	SPARE 2		
8			

Male connector: RJ45

- Yellow LED (connection) is off by default and lights up when a connection is detected.
- Green LED (work) flashes when data packets are being transmitted or received.

The shields of the Ethernet connections are connected to the housing of the device.



NOTE

Use at least CAT5e SFTP connecting cables.

6.5.2 POWER

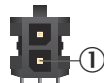


Table 3: POWER pin assignment

Pin	Signal	Function	Level
1	GND	Ground	0 V
2	Vcc_In	Input Voltage	V _s (see "Mechanics and electronics", page 27)

Male connector: Molex 43045-0200 Micro-Fit 2p

Plug connector: Molex 43025-0200 Micro-Fit 2p

Crimp contact: Molex 43030-0007

Connection of the functional ground with a 6.3 mm flat connector (see "Device view", page 11).

Pin 1 (GND) is connected to the housing of the device.

There is no galvanic isolation between GND/Vcc_In and System GND.



CAUTION

All circuits connected to the device must be designed as SELV circuits (in accordance with EN 61010).

6.5.3 USB host

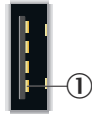


Table 4: Pin assignment of USB host

Pin	Signal	Function	Level
1	USB_H1_VBUS	Voltage supply	+5 V DC max 500 mA
2	USB_H1_DN	Data minus (D-)	
3	USB_H1_DP	Data plus (D+)	
4	GND	Ground	

Male connector: USB type A

6.5.4 USB OTG



Table 5: Pin assignment of USB OTG

Pin	Signal	Function	Level
1	USB_OTG_VBUS	Voltage supply	+5 V DC max 500 mA
2	USB_OTG_DN	Data minus (D-)	
3	USB_OTG_DP	Data plus (D+)	
4	USB_OTG_ID	Device ID	
5	GND	Ground	

Male connector: Micro-USB type AB

6.5.5 SD card slot

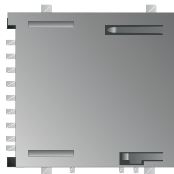


Table 6: Pin assignment SD card slot

Pin	Signal	Function	Level
1	DAT3		
2	CMD	Pull-up	3.3 V
3	GND	Ground	
4	VDD		3.3 V
5	CLK		
6	GND	Ground	

Pin	Signal	Function	Level
7	DAT0		
8	DAT1		
9	DAT2		

6.5.6 Battery compartment

Pin	Name	Function	Level
1	VCC	Supply	3 V
2	GND	Ground	

Male connector: AUK BH19VWG - R5H -H
 Battery: CR1220

6.6 Connecting peripheral devices

The device can be connected to a wide range of sensors and cameras as well as devices from the SIM family.

The required pin assignments can be found in the data sheets for the peripherals to be connected as well as in the relevant connection descriptions, see ["Pin allocation of the connections"](#), page 19.

1. If necessary, assemble connection cables, see ["Assembling the cables \(optional\)"](#), page 18
2. Connect the cables to peripheral devices.
3. Route the cables to the device using installation materials (cable channels, cable ties, etc.). When doing so, pay attention to cable strain relief.
4. Connect cables to the relevant device connections and screw together tightly and/or secure.



NOTICE

Use of interfaces:

- USB interfaces are only intended for configuration and diagnostics (e.g. connection of keyboard/mouse) and not for productive operation.

7 Commissioning

7.1 Preparatory commissioning

Commissioning for preparatory purposes and under laboratory conditions differs in some respects from commissioning in the target system.

In general, all safety and hazard warnings applicable to mounting (see ["Mounting", page 15](#)) and electrical installation (see ["Important notes", page 17](#)) must also be observed under laboratory conditions. In addition, further notes must be taken into consideration to guarantee the most effective preparation possible:

- Only connect those devices to the product that you specifically want to configure or program.
- Operate the connected device in a controlled and contained network environment for the time being to check network communication if necessary.
- Note the company standards that apply to the use of checking and testing devices.
- For initial programming, use ideal conditions for sensor or camera recognition.
- Use the largest possible deviations from these ideal conditions to check the programming with respect to its error tolerance and reliability, and to determine error limit values.

Procedure

1. Place the device on a non-slip base.
2. Connect the required peripheral devices, see ["Connecting peripheral devices", page 21](#).
3. Connect the network connection.
4. Connect the voltage supply.
5. Switch on the voltage supply.

7.2 Start-up

The Sensor Integration Display starts automatically after the voltage supply has been established and starts an app which is pre-installed in the delivery condition.

With this app, the device can be configured, connected devices can be found with a web server and their user interface can be accessed.

The typical start time is < 40 seconds.

8 Operation

The Sensor Integration Display is operated exclusively by touch.

A horizontal swipe gesture from the left edge of the display opens the sidebar menu that provides the following functions:

Table 7: Available functions

Display	Function
HOME	Return to the user interface of the “Device Discovery” application
DEVICE	Return to the user interface of a connected device
RESTART	Restart of the SopasAir browser
LICENCE	Access to license agreements
BRIGHTNESS	Screen brightness setting
TIMEOUT	Screen timeout settings in minutes [1 ... ∞]

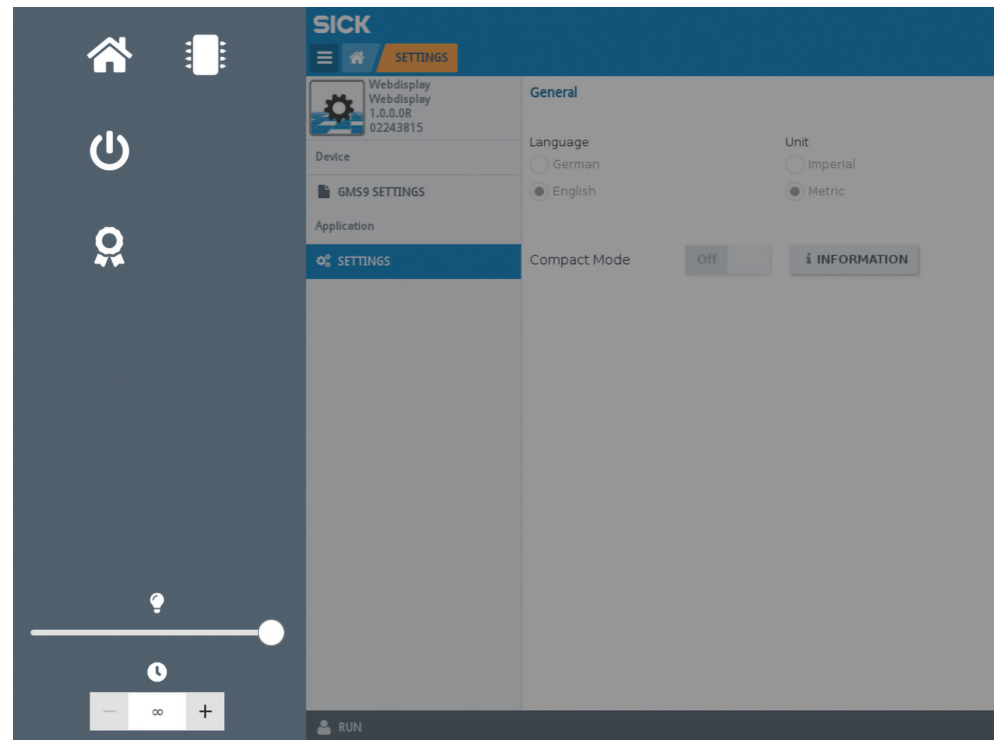


Figure 5: Display functions

9 Maintenance

9.1 Cleaning



NOTICE

Device damage due to improper cleaning!
Improper cleaning may result in device damage.

- Only use recommended cleaning agents.
- Never use sharp objects for cleaning.

- The device must be cleaned regularly from the outside to guarantee heat dissipation and therefore operation.
- It is recommended to wipe the surfaces frequently with a damp, soft cloth and to finish off with a soft, dry cloth.
- If the frame is very dirty, do not use acidic or abrasive cleaners, as these will attack the surface structure. Instead, use water with a neutral soap added, or limescale cleaners appropriate for the surface.
- 2-Propanol/Isopropanol (isomeric alcohol) can be used for disinfection.

9.2 Maintenance

During operation, the device works maintenance-free. Depending on the application, the following maintenance tasks may be required for the device at regular intervals:

Maintenance work	Interval	To be carried out by
Internal battery replacement	After a typical lifetime of 8 years	Specialist

9.2.1 Internal battery replacement

The device is equipped with an internal primary lithium battery (type CR1220), which has a typical lifetime of 8 years. The battery must be replaced with one of the following brands:

Manufacturer	Model
Varta	CR1220
Alpha 3 Manufacturing Ltd.	YOBCR1220
Keystone	1220
Maxell	CR1220



CAUTION

Danger of explosion if the wrong type of battery is used!

Only replace the battery with a lithium battery of the same or equivalent type recommended here.



NOTICE

Danger for the environment in case of improper disposal!

Do not dispose of used batteries in household waste. Please dispose of the battery in accordance with local regulations (e.g. collection points for battery disposal).

The device is only allowed to be opened by authorized and qualified personnel.

The following figure shows the position of the internal battery. For replacement, the SD card must be removed and the back of the device removed.

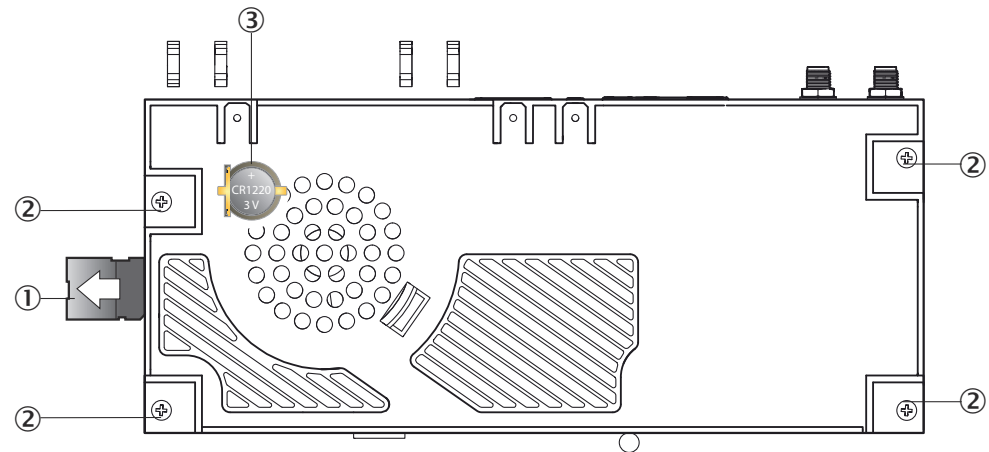


Figure 6: Battery replacement

- ① Card slot
- ② Screws
- ③ Battery compartment

1. Remove the SD card from the card slot ①.
2. Loosen and remove the screws ②.
3. Remove the battery from the battery compartment ③ and insert a new one.
4. Tighten the screws ②.
5. Insert the SD card into the card slot ①.



WARNING

Danger due to electrical current!

- Before opening, make sure that the device is completely disconnected from the voltage supply, both directly and indirectly.
- During battery replacement, care must be taken to ensure adequate ESD protection.
- To remove the rear of the device, all connecting cables must be removed beforehand.
- Make sure that the SD card is removed as it will block the removal of the rear of the device.
- Be careful and pay attention to the connections when removing the rear of the device. Especially, the Micro-USB connection is at significant risk of damage.



NOTE

Setting the real time clock

- After the battery has been replaced, the RTC must be reset.
- For this, the SICK AppEngine application software provides the `DateTime.setDateTime()` API. More detailed information can be found in the API documentation at supportportal.sick.com.

10 Decommissioning

10.1 Disposal

**CAUTION**

Risk of injury due to hot device surface.

The surface of the device can become hot during operation.

- Before commencing disassembly, switch off the device and allow it to cool down as necessary.
-

If a device can no longer be used, dispose of it in an environmentally friendly manner in accordance with the applicable country-specific waste disposal regulations. Do not dispose of the product along with household waste.

**NOTICE**

Danger to the environment due to improper disposal of the device.

Disposing of devices improperly may cause damage to the environment.

Therefore, observe the following information:

- Always observe the valid regulations on environmental protection.
 - Separate the recyclable materials by type and place them in recycling containers.
-

10.1.1 Disposal of used batteries

Batteries must not be disposed of with household waste!

Batteries must be disposed of in accordance with statutory requirements and can be taken to local collection points or anywhere that sells batteries, for example.

The following symbol on batteries and rechargeable batteries, on the device or in this document indicate this obligation:



11 Technical data



NOTE

The relevant online data sheet for your product, including technical data, dimensional drawing, and connection diagrams can be downloaded, saved, and printed from the Internet:

- www.sick.com/SID

Please note: This documentation may contain further technical data.

11.1 Features

	SID120	SID70
CPU	i.MX6 Dual ARM Cortex – A9 with 1 GHz RTC accuracy: ± 30 ppm at 25 °C	
Random Access Memory	4 GB eMMC Flash 1 GB RAM	
Other functions	NEON for SMID media acceleration and VFP operation OpenGL ES 2.0 OpenVG 1.1	

11.2 Interfaces

	SID120	SID70
Ethernet	✓(2)	
Data transmission rate	10/100 Mbit/s	
USB	✓(2)	
Function	Host (type A), OTG (Mico-AB type)	
Data transmission rate	480 Mbit/s	
application development kit	SICK AppStudio	
Memory card	4-bit MMC/SDIO/SD/SDHC Included with delivery: industry-compliant SD memory card, min. 4 GB	

11.3 Mechanics and electronics

	SID120	SID70
Display		
Size	12.1"	7"
Resolution	1,024 px x 768 px	800 px x 480 px
Brightness	Typ. 480 cd/m ²	
Lifetime backlight	50,000 h	
Viewing angle	89°, 89°, 89°, 89° (UDRL)	50°, 70°, 70°, 70° (UDRL)
Color	24 bit (16.2 million colors)	24 bit (16.7 million colors)
Touch display	Projective capacitive multi-touch	
Housing		

	SID120	SID70
Front screen	4.0 mm tempered glass, RAL 9005 (black)	3.0 mm
Frame	Zinc alloy, matt chrome-plated	Aluminum, anodized
Back	Stainless steel 1.4016, foam seal	
Supply voltage V_s	13 V DC ... 32 V DC	9 V DC ... 32 V DC
Power consumption	Typ. 17 W max. 39.2 W	typ. 6.5 W max. 28.2 W
Enclosure rating	front side: IP66 Rear side: IP20	
Weight	2,700 g	861 g
Dimensions (W x H x D)	305.9 mm x 242.7 mm x 41 mm	206.9 mm x 126.2 mm x 33.6 mm
Protection class	III	

11.4 Ambient data

	SID120	SID70
Electromagnetic compatibility (EMC)	IEC 61000-6-4:2006+AMD1:2010 EN 61000-6-4:2007 + A1:2011 IEC 61000-6-2:2016 (Industrial Environment)	
Ambient temperature, operation	0 °C ... +60 °C	-20 °C ... +60 °C
Ambient temperature, storage	-20 °C ... +70 °C	
Permissible relative humidity	5 ... 90%, non-condensing	

12 Annex

12.1 Dimensional drawings

All measurements in mm.

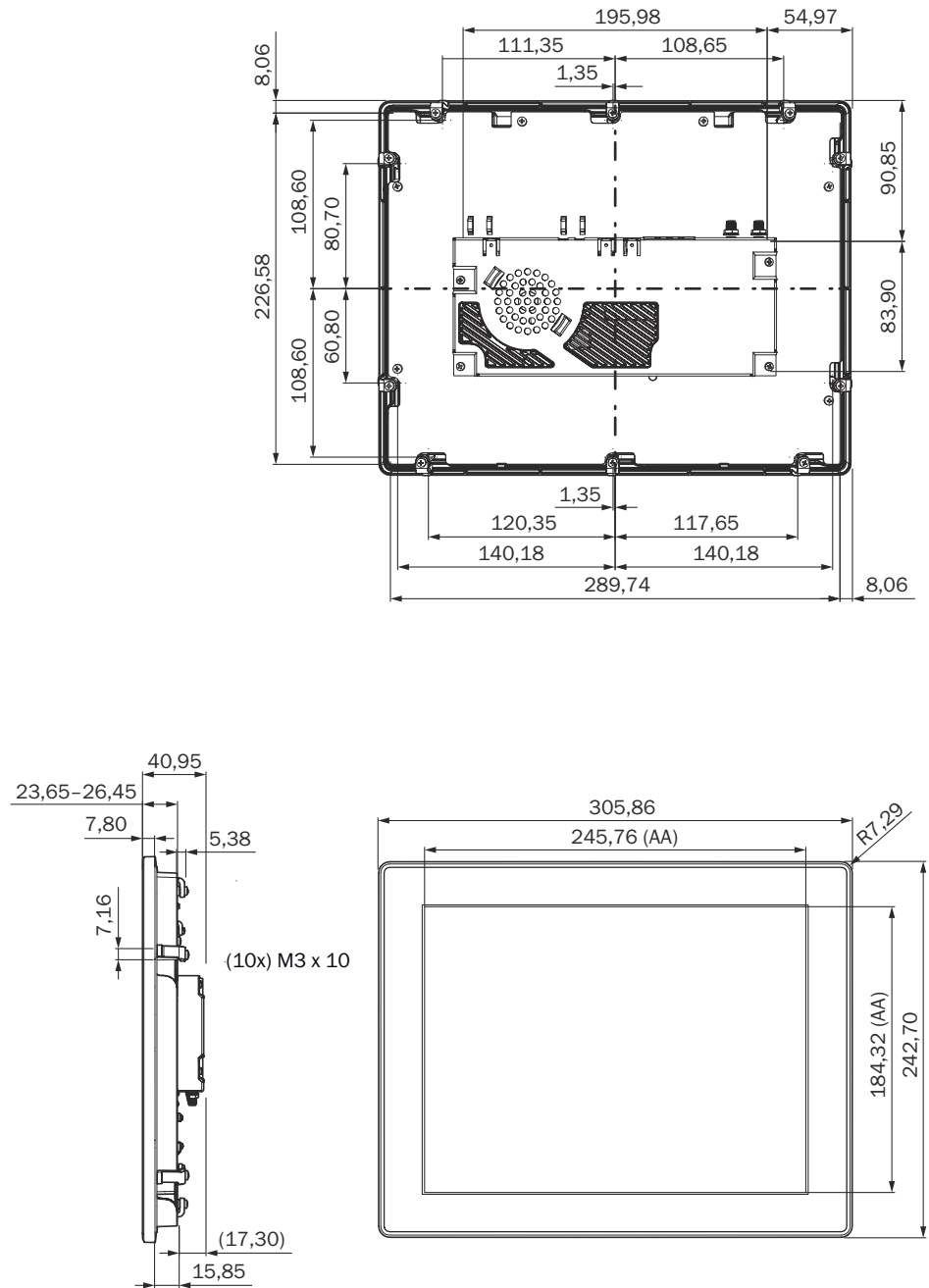


Figure 7: Dimensional drawing for the SID120

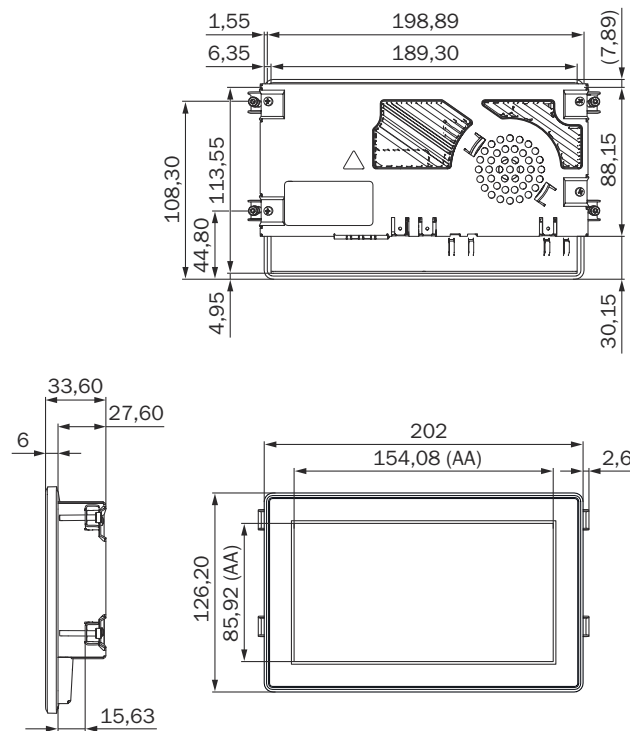


Figure 8: Dimensional drawing for the SID70

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